

Serial No.: 09/995,738
Atty. Docket No.: P67357US0

REMARKS

The Office Action mailed March 11, 2004, has been carefully reviewed and by this Amendment, Applicants have amended claims 1-5, and added claim 6. Claims 1-6 are pending in the application. Claims 1, 4 and 6 are independent. The specification was also amended for clarity in view of awkwardness introduced through the translation. No new matter has been added. In view of the amendments and remarks contained herein, favorable reconsideration in this application is respectfully requested.

The Examiner rejected claims 1 and 3 under 35 U.S.C 103(a) as being unpatentable over U.S. Patent No. 6,767,978 to Revankar et al. ("Revankar") in view of U.S. Patent No. 6,176,396 to Lokken. Also under 35 U.S.C. 103(a), the Examiner rejected claim 2 as being unpatentable over Revankar in view of Lokken and further in view of U.S. Patent No. 6,584,236 to Maruo et al. ("Maruo"), and rejected claims 4 and 5 as being unpatentable over Revankar in view of U.S. Patent No. 5,933,823 to Cullen et al. ("Cullen").

As set forth in amended claims 1 and 4, as well as new claim 6, the present invention is directed to a method for sorting and browsing static images in which the texture of each of the static images is represented by a numeric value. This numeric value is determined by counting the number of edge pixels of objects in each of the static images as a means of measuring the texture of each of the static images. The images may then be sorted or searched based on the measured textures, i.e., on the numeric values representing the textures. This is not shown or suggested by the prior art.

Revankar discloses an adaptable image segmentation system for classifying image regions into one of three categories, namely a text class, a picture class and a graphic class. The edge detection output is used for counting the number of weak and strong edges in one image region and, based on the number of edge types, the image regions are classified. This is not comparable to the present invention.

As summarized above, according to the method of the present invention, the texture is measured by counting edge pixels of objects in a static image, with the texture being represented by an absolute numeric value (see the specification at page 3, line 22 to page 4, line 17). Once the textures have been measured, the static images may be sorted on the basis of the measured texture values. In Revankar, by contrast, edge pixels are classified as being of a “strong” or “weak” type, and each type of the edge pixels is counted to only generally classify the image regions within the three classes (text, picture and graphic). There is no generation of a specific numeric value representing the texture of a specific static image.

Nor does Cullen provide such teaching. Cullen discloses a method for querying a document image database based on texture, with texture being defined by analytically discernable patterns in the document images within the database. Thus, the texture of Cullen is image feature information such as an image feature vector. This is entirely different from and not comparable to the *digital* representation of the texture of the static images determined by counting the edge pixels of objects in such images, as claimed by the present invention.

For at least the foregoing reasons, Applicants submit that claims 1 and 4 as amended are not shown or suggested by Revankar, either alone or with Lokken or Cullen. Favorable reconsideration is therefore requested.

Claims 2, 3 and 5 are also in condition for allowance as claims properly dependent on an allowable base claim and for the subject matter contained therein.

More particularly, there is nothing in Revankar to teach or suggest a texture measurement that generates a numeric value, i.e., a specific and individual number, that may then form the basis for targeted sorting and browsing among static images having most nearly corresponding values, as set forth in claims 3 and 5 of the present invention.

With respect to claim 2, Maruo does not teach or suggest the use by the present invention of a Wavelet transform for transforming the static image followed by the use of a Sobel operator for eliminating noise included in the transformed static image in order to obtain the edge information. Instead, Maruo discloses noise removal means for removing noise from the input image and then a Wavelet transform means for performing a two-dimensional Wavelet transform to the image. In other words, the noise is removed from the input image *before* the two-dimensional Wavelet transform is performed. In addition, *Maruo does not teach or suggest use of a Sobel operator*. Therefore, claim 2 is not shown or suggested by the prior art but is patentable thereover.

New claim 6 is further patentable over the prior art for the same reasons as provided in connection with claim 2. Support for new claim 6 is found in the specification at

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page 3, line 22 to page 4, line 15; page 4, line 27 to page 5, line 14; and page 6, line 16 to page 7, line 14.

Accordingly, for at least the foregoing reasons, the pending claims are in condition for allowance. Should the Examiner have any questions or comments, the Examiner is cordially invited to telephone the undersigned attorney so that the present application can receive an early Notice of Allowance.

Respectfully submitted,

JACOBSON HOLMAN PLLC

By 

Yoon S. Ham
Reg. No. 45,307

400 Seventh Street, N.W.
Washington, D.C. 20004
Telephone: (202) 638-6666
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